

# 1993 Index to Volume 55 of *The American Biology Teacher*

This index includes everything published in *The American Biology Teacher* during 1993 (Volume 55) except filler material. Book reviews in the Title Index are listed with the names of the book author(s) in parentheses; AV reviews list the name of the producer in parentheses. In both cases, the reviewers are listed in the Author Index. Initial articles (i.e. a, an, the) are not considered in alphabetization of the index. The index is alphabetical word-by-word. For example, "Educational" would follow "Education Theory." Page numbers indicate the first page of the article or department in which the entries appear.

Entries are in three categories: Subject, Title and Author. All entries include one of the following key codes:

A = Articles  
B = Biology Today  
C = Computer Center  
D = Other Departments  
E = Editorial  
F = Feature  
H = How-To-Do-It  
L = Letters  
P = Projector Center  
R = Book Reviews  
T = Teacher-To-Teacher  
V = AV Reviews

## SUBJECTS

AIDS.....4:198  
Animals in education.....5:276A  
Animal rights.....3:136A, 4:204A  
Biology education.....1:21A, 5:282A  
Biological olympiads....7:399A  
Botany.....2:96H, 5:312R  
Cancer.....5:312R  
Classification.....3:182H, 8:456A  
Computers.....2:110H, 2:123C, 4:245H, 4:251C, 6:376C, 7:443C, 8:502C  
Critical thinking.....3:132E, 4:196E  
Creationism.....6:334A

Dissection.....3:147A  
DNA.....4:216H  
Ecology.....2:71A, 3:165H, 5:292D, 6:350A, 7:412A, 7:424H  
Enzymes.....5:300H  
Evolution.....2:78A, 5:312R, 8:481H  
Gaia hypothesis....2:115H  
Gene regulation.....1:38H, 3:174H  
Global warming.....4:222H  
Grades.....7:388E  
Gravitropic responses....2:104H, 6:370H  
Greenhouse effect....4:238H  
Health.....5:308B  
Immunology.....7:434H  
Laboratory safety.....5:302H  
Meteorology...8:488H  
Microbiology.....5:268A, 5:288A  
Microevolution.....6:362H  
Protein synthesis....2:102H  
Science.....1:4E  
Science education.....1:8A, 3:140A, 3:144A, 3:178H, 4:233H, 6:340A, 8:452E, 8:473A  
Science fairs.....8:464A  
Science literacy.....2:68E, 2:85A, 4:213A, 5:265A, 5:260E, 7:388E  
Taxonomy.....5:298H, 8:456A  
Teaching techniques.....4:233H, 4:241H, 5:260E, 6:324E  
Textbooks.....1:14A, 5:312R, 8:468A  
UV radiation.....1:42H  
Velcro.....1:44H  
Videomicroscopy.....5:304H  
Water quality...4:228H, 8:478H

## TITLES

### Articles

College Students' Perceptions on Adequacy of High School Science Curriculum as Preparation for College Level Biology.....1:8A  
What's Important in Selecting a Biology Textbook?.....1:14A  
Neural Communication in a Mnemonic Nutshell: A Cognitive Framework that

Improves Understanding.....1:21A  
Eco-Logic: Teaching the Biological Principles of Sustainability.....2:71A  
Origin of Life & Evolution in Biology Textbooks—A Critique.....2:78A  
Conversations with a Petri Dish.....2:84A  
The Tentative Nature of Scientific Knowledge: Why Should We Teach About Diabetes Mellitus?.....2:85A  
The Impact of Animal Rights on the Use of Animals for . . . .....3:136A  
A National Priority: Providing Quality Field Experiences for All Students.....3:140A  
A Status of Laboratory Instruction for Introductory Biology in U.S.....3:144A  
The Importance of Dissection in Biology Teaching.....3:147A  
"A Grant & Peer Teaching" Help To Bring the Sea to North Grade....3:150A  
A Vaccine For AIDS.....4:198A  
Biomedical Research & the Animal Rights Movement: A Contrast in Values.....4:204A  
Origin of the Punnett Square.....4:209A  
AP Biology: An Alternative Laboratory Approach.....4:213A  
National Science Education Standards: How You Can Make a Difference.....5:265A  
Dinner Date with a Microbe....5:268A  
Animals in Education: Are We Prisoners of False Sentiment?.....5:276A  
Biology, STS & the Next Steps in Program Design & Curriculum Development.....5:282A  
Observations on Microbiology Laboratory Instruction for Allied Health Students.....5:288A  
Student Perceptions About Science & Religion.....6:334A  
College Biology Teaching: A literature Review, Recommendations & a Research Agenda.....6:340A  
Preserving Our Urban Wilds: A Biology Education Resource.....6:350A  
Species as Systems.....7:392A

Biological Olympiads in the USSR.....7:399A  
 Lasting Impact.....7:412A  
 Taxonomy, Ideology & the Structure of the Natural History Field Guide.....8:456A  
 Science Fair: A Successful Venture.....8:464A  
 Action Potentials & Biology Textbooks: Accurate, Misconceptions or Avoidance?.....8:468A  
 The Value Placed on Secondary School Experience by Science Instructors & Personnel Officers at Community Colleges.....8:473A

#### AV Reviews

Biodiversity: The Variety of Life.....3:189V  
 Characteristics of Life.....3:189V  
 An Introduction to Electrophoresis.....4:254V  
 Marching to a Different Drummer: The Life & Career of Jonas Salk.....6:378V  
 The Rhododendron Leaf.....6:378V  
 Map of Life: Science, Society, & the Human Genome Project.....6:379V

#### Biology Today

Miscellaneous.....1:53B  
 Looking at the Cell Once Again.....2:118B  
 Biology Today.....3:185B  
 Studies in Iconography.....4:247B  
 Lucky.....5:308B  
 Evolution at the Center.....6:372B  
 Bad Words.....7:439B  
 The Biology of Aesthetics.....8:497B

#### Book Reviews

Science Experiments Index for Young People Update 91 (Mary Anne Pilger).....1:59R  
 River Pollution: An Ecological Perspective (Sylvia M. Haslam).....1:59R  
 Seeds, Etc. . . . (Carl Tant).....1:59R  
 Mass Extinctions: Processes and Evidence (Stephen K. Donovan).....2:125R  
 Dissection Guide to the Fetal Pig: A

Photographic Guide (L. H. Jones).....2:125R  
 Wildlife Habitat Relationships in Forested Ecosystems (David R. Patton).....2:125R  
 Atlas of the Human Skull (J.L. Montgomery & G. L. Henryson).....3:191R  
 Plant Biotech-The New Turn-On (Carl Tant).....3:191R  
 Focus on Human Biology (C. E. Rischer & T. A. Easton).....3:191R  
 The Diversity of Life (Edward O. Wilson).....4:255R  
 Comparative Ecology of Microorganisms and Macroorganisms (John H. Andrews).....4:255R  
 Cancer Selection. A NEW Theory of Evolution (James Graham).....5:312R  
 One Long Argument. Charles Darwin and the Genesis of Modern Evolutionary Thought (Ernst Mayr).....5:312R  
 Should Textbooks Challenge Students? The Case for Easier or Harder Textbooks (J. Chall & S. Conard with S. Harris-Sharples).....5:312R  
 Seeds of Woody Plants in North America (J.A. Young & C.G. Young).....5:312R  
 The Case for Easier or Harder Textbooks.....6:380R  
 Basic Microbiology.....6:381R  
 A Laboratory Textbook of Anatomy & Physiology Lab Manual: The Cat.....6:381R  
 Principles of Human Anatomy.....6:382R  
 The Code of Codes: Scientific & Social Issues in the Human Genome Project.....7:446R  
 Living Fossil: The Story of the Coelacanth.....7:446R  
 Extinction: Bad Genes or Bad Luck.....7:447R  
 The Naturalist's Path: Beginning the Study of Nature.....7:448R  
 Of Plants & People.....8:503R  
 Interpreting Evolution: Darwin & Teilhard de Chardin.....8:504R  
 Virus Hunting: AIDS, Cancer, & the Human Retrovirus: A Story of

Scientific Discovery.....8:504R

#### Computer Center

Getting Started with Technology.....1:57C  
 Tutorial Software.....2:123C  
 QuickTime.....4:251C  
 A Review of *Test Builder*.....6:376C  
 Software Review.....7:443C  
 Review of *Essence of Biology*.....8:502C

#### Editorial

Science & Uncertainty.....1:4E  
 How the Public Learns About Science.....2:68E  
 Voting in Science: Raise Your Hand If You Want Humans To.....3:132E  
 Let's Try Hedonism.....4:196E  
 Doing More Than Just "Covering" Information.....5:260E  
 Let's Teach Biology with a Hook & a Story.....6:324L  
 Grades & Self-Esteem.....7:388E  
 Models & Metaphors.....8:452E

#### How-To-Do-It

A Quick, Easy, Investigative Laboratory for Studying the Control of Gene Expression.....1:38H  
 Using Yeast & Ultraviolet Radiation To Introduce the Scientific Method.....1:42H  
 Velcro & Seed Dispersal.....1:44H  
 A pH & Computer Approach To Measuring Respiration Rate.....1:46H  
 Using Darwin's Experimental Work To Teach the Nature of Science.....1:50H  
 Tips for Teaching Plant Water Relations.....2:96H  
 Microscopic Titration & Extraction of DNA from Liver.....2:100H  
 Protein Synthesis: Role Playing in the Classroom.....2:102H  
 Negative Gravitropic Responses Induced by Centrifugation.....2:104H  
 Some Applications of HyperCard-Based Media in the Secondary Biology

Classroom.....2:110H  
 Using the Gaia Hypothesis To Synthesize an Introductory Biology Course.....2:115H  
 Use of a Simple, Colorimetric Assay to Demonstrate Conditions.....3:161H  
 Simulating Ecological Complexity Using the Example of Pesticides.....3:165H  
 Growth of Cultured Sweet Potato Explants.....3:170H  
 Studying Gene Frequencies in a Real Population.....3:174H  
 The Continuum: A Teaching Strategy for Science & Society Issues.....3:178H  
 The "Musical" Method of Teaching Classification.....3:182H  
 An Introduction to DNA Fingerprinting.....4:216H  
 Predicting Biological Response to Global Warming: A Laboratory Activity To Promote Discussion.....4:222H  
 Overhead Transparencies for Viewing Molecular Structure in Three Dimensions.....4:227H  
 Evaluation of Irrigation Water Quality.....4:228H  
 Training Graduate Students To Teach.....4:233H  
 Carbon Dioxide & the Greenhouse Effect: A Problem Evaluation Activity.....4:238H  
 Using Different Examples of Natural Selection When Teaching Biology.....4:241H  
 Using a Computer Data Base in the Biology Laboratory with Specific Application to the Herbarium Collection.....4:245H  
 Lab Practicums: Are We Teaching Sound Taxonomic Principles?.....5:298H  
 Potato Peroxidase for the Study of Enzyme Properties.....5:300H  
 Safe Science Classrooms for Students with Disabilities.....5:302H  
 Videomicroscopy Using a Home Camcorder: An Alternative to Commercial Systems.....5:304H  
 Culturing & Using Protozoans in the

Laboratory.....6:357H  
 A Model of Microevolution in Action.....6:362H  
 Staining for Ribonuclease Activity in Polyacrylamide Gels.....6:366H  
 Competitive Gravitropic & Phototropic Stimuli in Coleus.....6:370H  
 Diversity in a Hidden Community: Tardigrades in Lichens.....7:418H  
 A Simple Model to Think About the Evolutionary Rate in Macroevolution.....7:424H  
 A Laboratory Exercise for Isolating & Characterizing Microbial Mutants with Metabolic Defects.....7:430H  
 Immunology Labs Made Easy with Insects.....7:434H  
 Protection of the Water: Who Is Accountable?.....8:478H  
 Teaching Evolution: Designing Successful Instruction.....8:481H  
 Chimney Perching Behavior in Birds: A Practical Urban Field Study Investigating the Relationship Between Biology & Meteorology.....8:488H  
 Bone as a Spring.....8:495H

#### Letters

Much Ado About Mushrooms.....1:5L  
 Prejudices Against Plant Biology.....1:5L  
 Presenting Creationism As Science.....3:134L  
 Poster Available That Depicts Mapping of Human Chromosomes.....4:197L  
 Bioluminescent Phytoplankton Demonstrate Significant Science Concepts.....4:197L  
 Critique on Origin of Life & Evolution in Biology Textbooks Is Criticized.....4:197L  
 Is Less More, Or Is More Better?.....5:262L  
 Computer Instruction Graph Is Corrected.....5:262L  
 The Nature of Scientific Knowledge Debated.....5:262L  
 Origin of Life & Evolution in Textbooks Article Draws Criticism.....5:262L

Evolution vs. Creationism...6:326L  
 Animals in Education.....6:329L  
 More on Animals in Education.....7:390L  
 Dissection Debate...8:454L

#### Other Departments

President's Report.....1:7D  
 A Conversation with . . . David Suzuki.....1:31D  
 Guidelines for Authors.....1:62D  
 1992 Honorary Member & Distinguished Service Award Recipients.....1:64D  
 A Conversation with . . . Virginia Walbot.....2:90D  
 Call for OBTA Award Nominations.....2:122D  
 Call for Papers.....2:127D  
 A Conversation with . . . Karel Liem.....3:154D  
 A Conversation with . . . Ariel Lugo.....5:292D

#### Teacher-To-Teacher

Calling All Biology Teachers . . . Help Stamp Out Gobbledygook, Window Dressing & Trivia in the Classroom!.....3:159T

#### **AUTHORS**

Abraham, Doc.....3:159T  
 Abraham, Katy.....3:159T  
 Alcamo, I. Edward.....4:198A  
 Anderson, Rodney P.....1:38H  
 Applegate, Jim.....7:392A  
 Armstrong, Joseph E.....3:144A  
 Baier, Stephen W.....3:136A  
 Baker, Gail A.....2:115H  
 Barkoff, Allen.....2:102H  
 Bazler, Judith A.....5:302H  
 Beiswenger, Jane M.....4:222H, 4:238H  
 Benathen, Isaiah A.....5:288A  
 Berg, Virginia.....2:96H  
 Bicak, Charles J.....6:350A  
 Bicak, James S.....6:350A  
 Bicak, Laddie J.....6:350A  
 Biermann, Carol A.....2:85A  
 Biggs, Alton L.....1:7D

Bradley, Walter L.....2:78A  
 Brewer, Carol A.....4:222H, 4:238H  
 Campbell, Neil A.....1:31D, 2:90D,  
 3:154D, 5:292D  
 Carter, Jack L.....3:140A  
 Cava, FJ.....1:46H  
 Chiras, Daniel D.....2:71A  
 Coletta, W. John.....8:456A  
 Cooper, W.A.....3:170H  
 Creek, Robert.....6:340A  
 Curtright, Robert D.....2:100H  
 Dale, Allen R.....2:84A  
 Davis, Lawrence C.....2:104H,  
 4:209A  
 Dennison, Robert.....1:50H  
 Doe, Frank J.....7:430H  
 Duhrkopf, Richard.....1:57C,  
 2:123C, 4:251C, 6:376C, 8:502C  
 Dunn, Patricia C.....8:478H  
 Dushenkov, Vjacheslav M.....7:399A  
 Ebensshade, Donald H., Jr.....6:334A  
 Ellis, Linda.....3:174H  
 Elwell, Lynn P.....6:324E  
 Emsley, Michael.....1:59R, 2:125R,  
 4:255R, 5:312R,  
 6:380R, 7:446R, 8:503R  
 Farganis, Gertrude M.....4:216H  
 Faulkner, Samuel P.....5:304H  
 Fish, Frank E.....8:495H  
 Flannery, Maura C.....1:53B,  
 2:118B, 3:185B, 4:247B,  
 5:308B, 6:372B, 7:439B, 8:497B  
 Friedrichsen, Pat J.....1:42H  
 Galen, Donald F.....8:464A  
 Gibson, David J.....1:8A  
 Gibson, Lisa S.....1:8A  
 Gillen, Alan L.....5:268A  
 Glascoff, Mary A.....8:478H  
 Gottfried, Sandra.....6:340A  
 Hale, Edward M.....4:227H  
 Hampton, M.S.....3:170H  
 Hanson, Sharon L.....2:84A  
 Harley, Suzanne M.....3:161H,  
 6:366H  
 Hays, Rachel.....3:189V, 4:254V,  
 6:378V  
 Hendrix, Jon R.....3:178H  
 Hepfer, Carol E.....4:216H  
 Hershey, David R.....4:228H  
 Hoots, Rita.....6:340A  
 Hummer, Paul J., Jr.....6:357H

Kohn, Arthur.....1:21A  
 Laferriere, Joseph E.....6:370H  
 Lancaster, Malcolm.....2:78A  
 Leonard, William H.....1:14A  
 Leslie, John F.....7:430H  
 Lopez, Vincente Sanjose.....7:424H  
 Lord, Thomas.....6:340A  
 Lumsden, Ann S.....4:233H  
 Lundberg, Doug.....4:213A  
 Lykins, Kathryn V.....3:182H  
 Marco, Oscar Barbera.....7:424H  
 Mayo, Lois T.....1:42H, 2:100H  
 McInerney, Joseph D.....5:276A  
 McCune Bruce.....3:165H  
 Miller, Bruce.....2:110H  
 Mills, Gordon C.....2:78A  
 Moore, Randy.....1:4E, 2:68E, 3:132E,  
 4:196E, 5:260E, 7:388E, 8:452E  
 Morrison, Adrian R.....4:204A  
 Muir, Patricia S.....3:165H  
 Munson, Erik S.....8:456A  
 Odom, Arthur Louis.....8:468A  
 Offner, Susan.....3:147A, 7:406A  
 Ost, David H.....5:282A  
 Penick, John E.....1:14A  
 Perry, Robert T.....4:241H  
 Piperberg, Joel B.....4:216H  
 Podrez, Joseph J.....3:150A  
 Postiglione, Ralph A.....1:44H

Rasmussen, Christine G.....6:366H  
 Roberts, Renee.....5:302H  
 Rossbach, C.L.....3:170H  
 Scharmann, Lawrence C.....8:481H  
 Seligmann, Peter F.....1:46H  
 Shmaefsky, Brian R.....5:300H  
 Shofner, Marcia.....7:418H  
 Silvius, John E.....4:245H  
 Sines, Rae Ann.....6:340A  
 Skavaril, Russell V.....7:443C  
 Smith, R.A.....3:170H  
 Speece, Susan.....5:265A  
 Stamm, Alfred J.....8:488H  
 Siencel, John.....2:102H  
 Sundberg, Marshall D.....3:144A  
 Tamppari, Raymond.....6:340A  
 Tew, Wallace R.....8:473A  
 Thompson, Steven R.....1:46H  
 Veomett, George E.....2:100H  
 Weber, Peter G.....8:488H  
 Weber, Suzanne P.....8:488H  
 Welch, Larry A.....6:362H  
 Wheatley, Jack H.....8:473A  
 Williams, Robert P.....5:268A  
 Yager, Robert E.....5:282A  
 Yurkiewicz, William J.....7:434H  
 Verderber, Gustav W.....7:412A  
 Vodopich, Darrell.....7:418H  
 Vogt, Kenneth D.....5:298H

### Index to Advertisers

American Society of Mammalogists.....	485
Benjamin/Cummings Publishing Company.....	455
Carolina Biological Supply Company.....	back cover
Connecticut Valley Biological .....	453
EDVOTEK, Inc.....	inside front cover
Genentech, Inc.....	476, 477
Nebraska Scientific.....	461
Plenum Publishing.....	499
Tottleben Scientific.....	479
Swift Instruments, Inc.....	493
University of Maryland.....	466, 467
University of Michigan.....	505
Ward's Natural Science Establishment, Inc.....	451
William C. Brown Publishers.....	inside back cover



